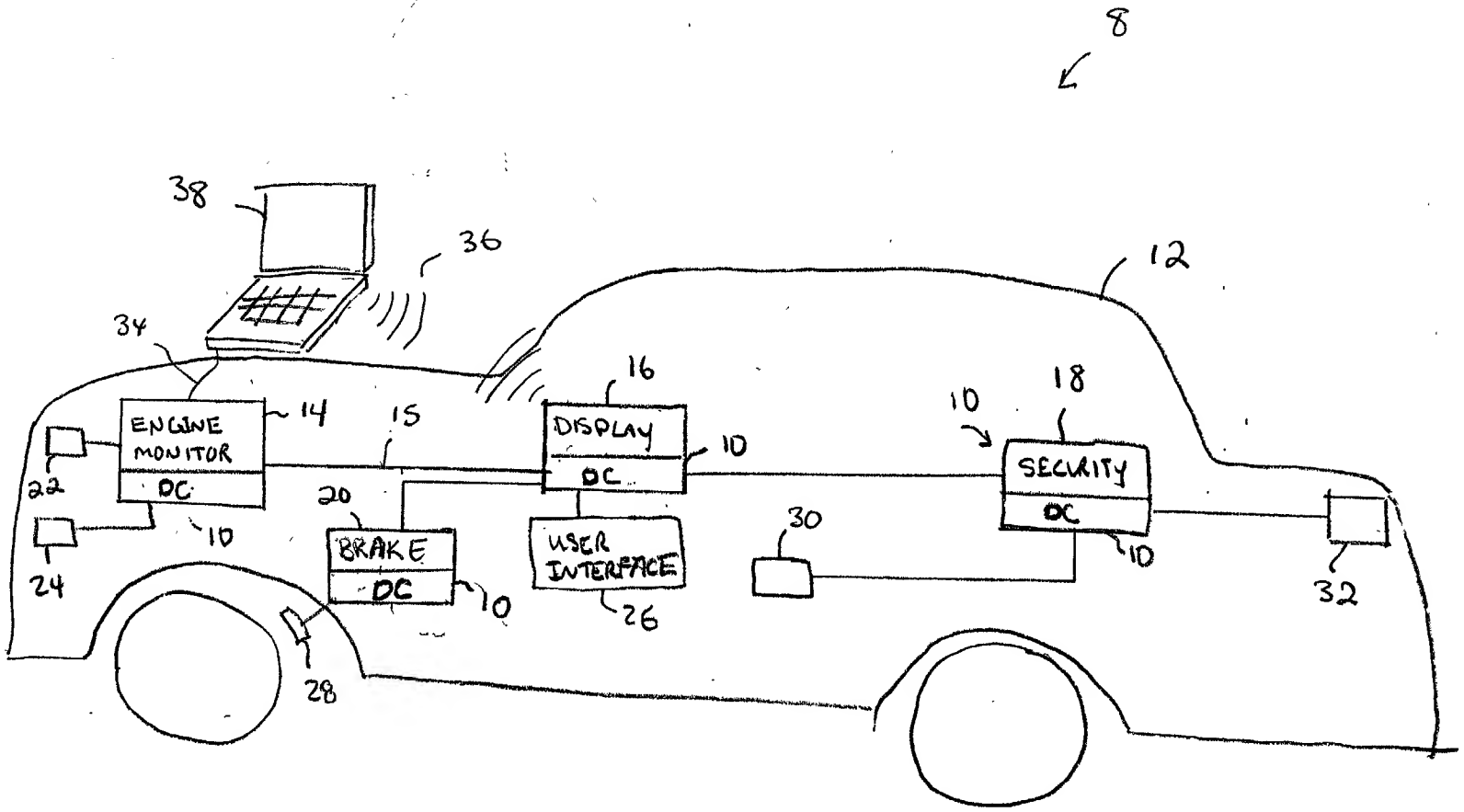
8
38
36
12
34
16
18
10
ENGINE MONITOR
DC
14
15
DISPLAY
DC
10
SECURITY
DC
22
24
10
20
BRAKE
DC
10
USER INTERFACE
26
30
32
28

FIG. 1

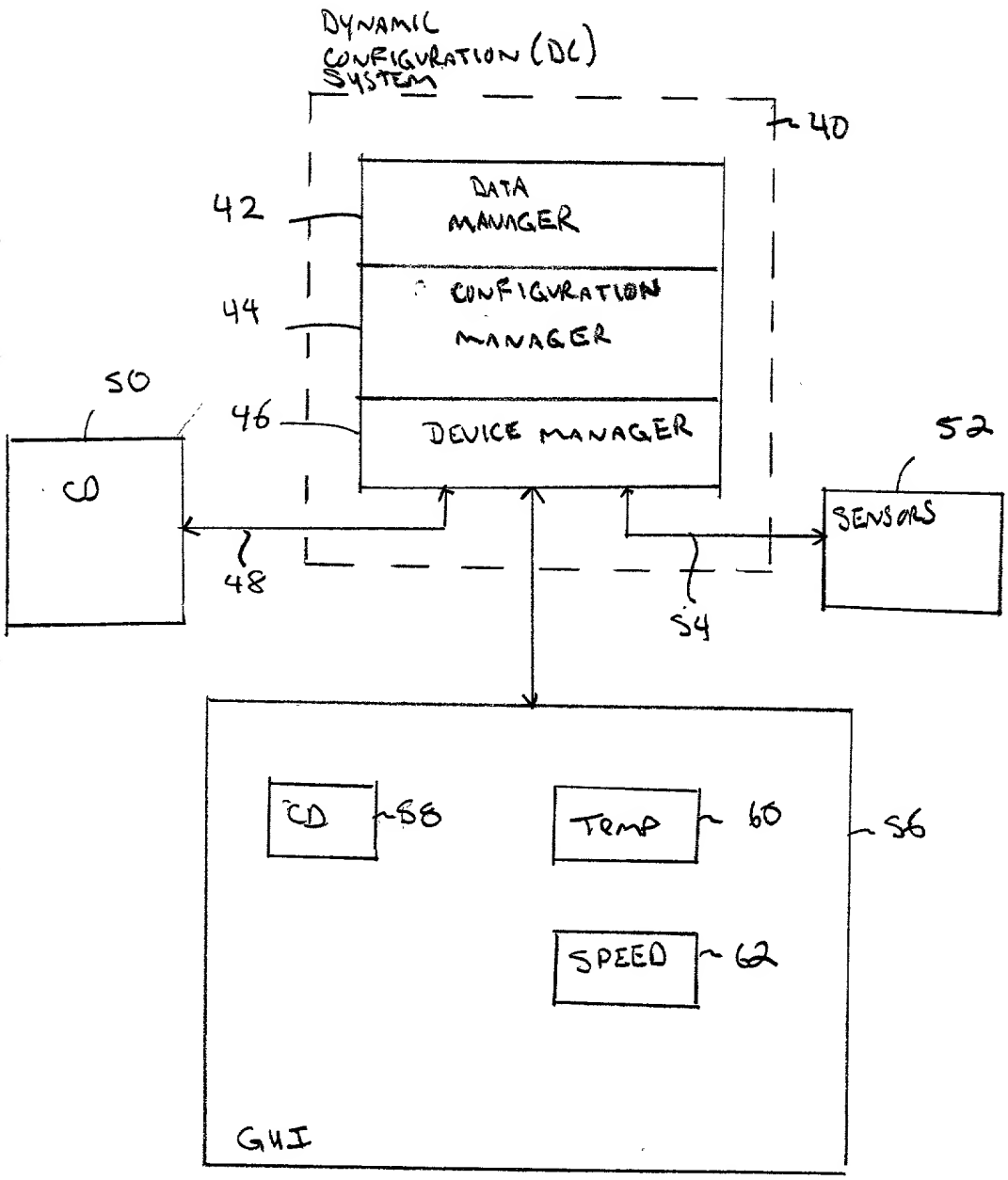
DYNAMIC CONFIGURATION (DC) SYSTEM
40
42
DATA MANAGER
44
CONFIGURATION MANAGER
46
DEVICE MANAGER
50
CD
52
SENSORS
48
54
CD
58
TEMP
60
56
SPEED
62
GUI

FIG. 2

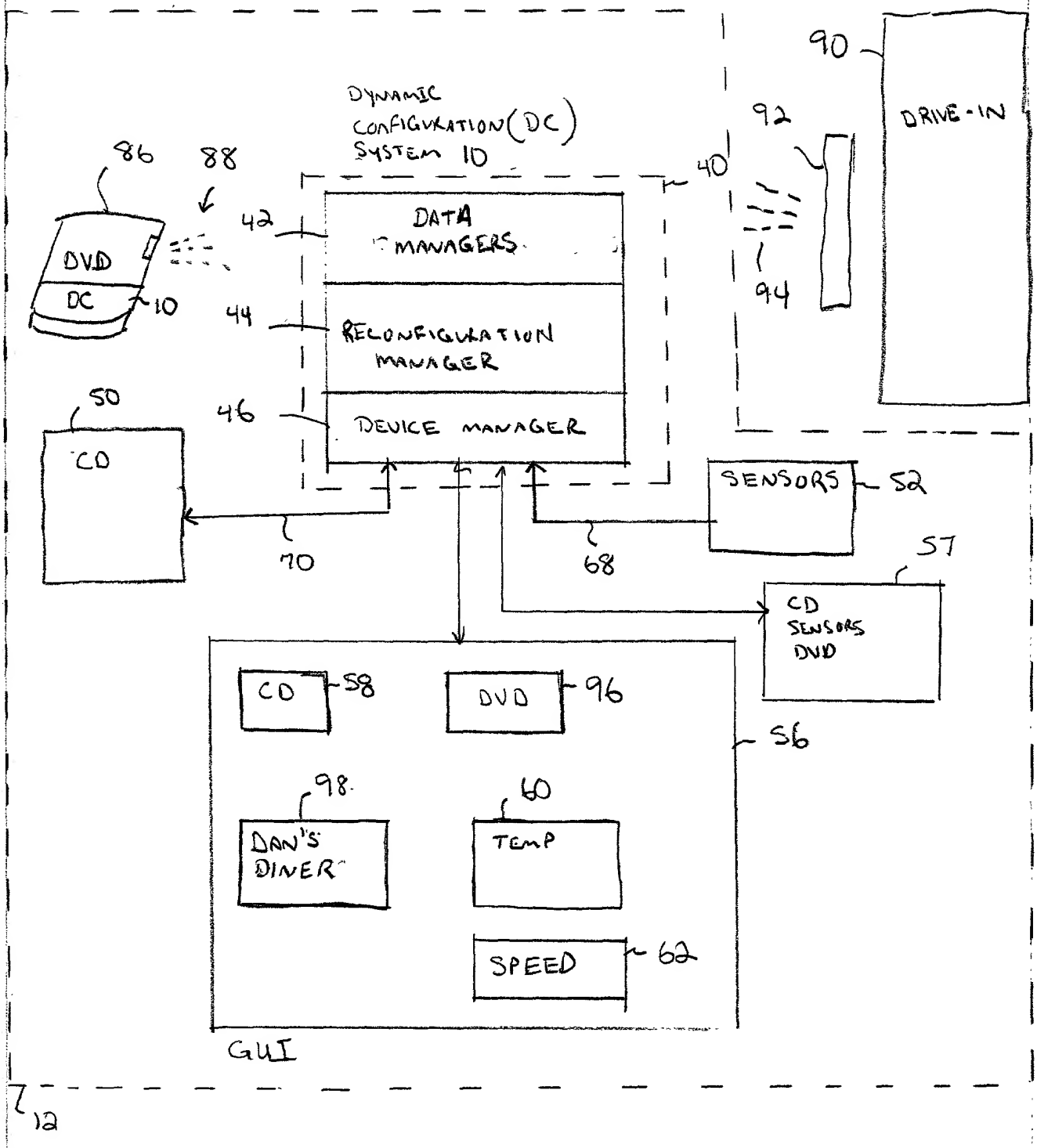
DYNAMIC CONFIGURATION (DC) SYSTEM 10
86
88
DVD
DC
10
42
DATA MANAGERS
44
RECONFIGURATION MANAGER
46
DEVICE MANAGER
40
90
DRIVE-IN
92
94
50
CD
70
68
SENSORS
52
57
CD SENSORS DVD
CD
58
DVD
96
56
98
DAN'S DINER
60
TEMP
SPEED
62
GUI
12

FIG. 3

10h2h0" ST6Th860

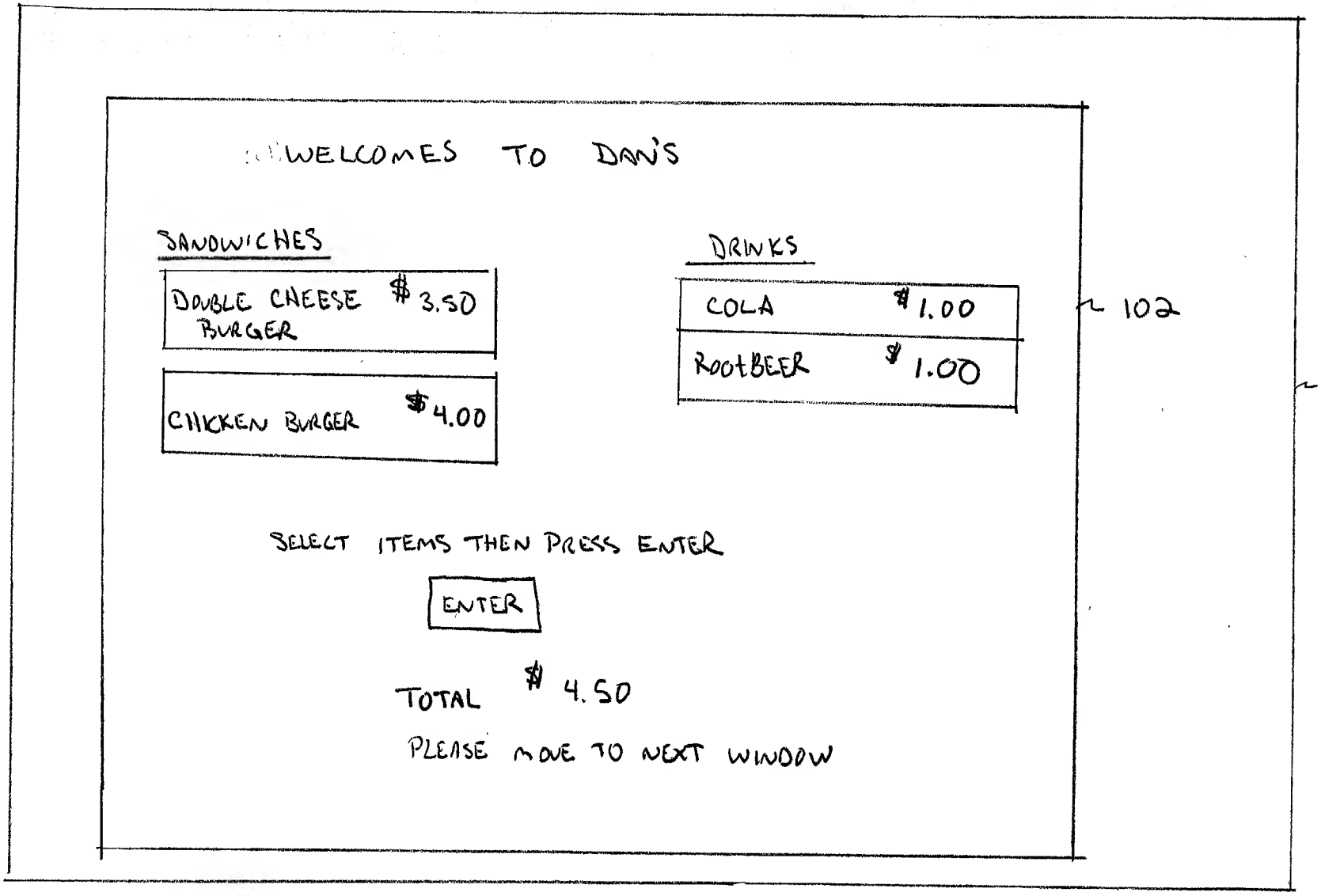

FIG. 4

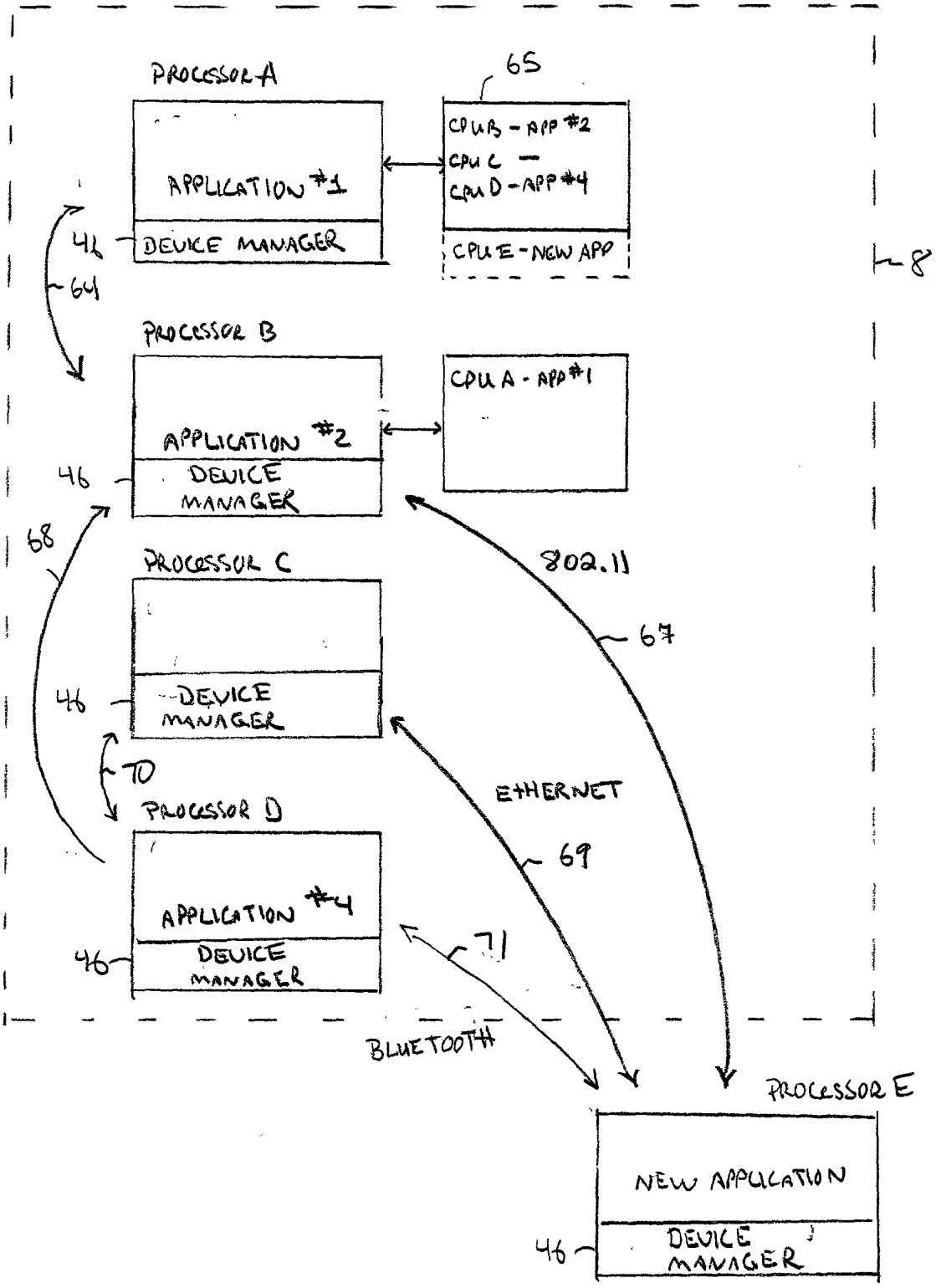
PROCESSOR A
65
CPU B - APP #2
CPU C —
CPU D - APP #4
CPU E - NEW APP
APPLICATION #1
DEVICE MANAGER
41
64
8
PROCESSOR B
CPU A - APP #1
APPLICATION #2
DEVICE MANAGER
46
68
802.11
67
PROCESSOR C
DEVICE MANAGER
46
70
ETHERNET
69
PROCESSOR D
APPLICATION #4
DEVICE MANAGER
46
71
BLUETOOTH
PROCESSOR E
NEW APPLICATION
DEVICE MANAGER
46

FIG. 5

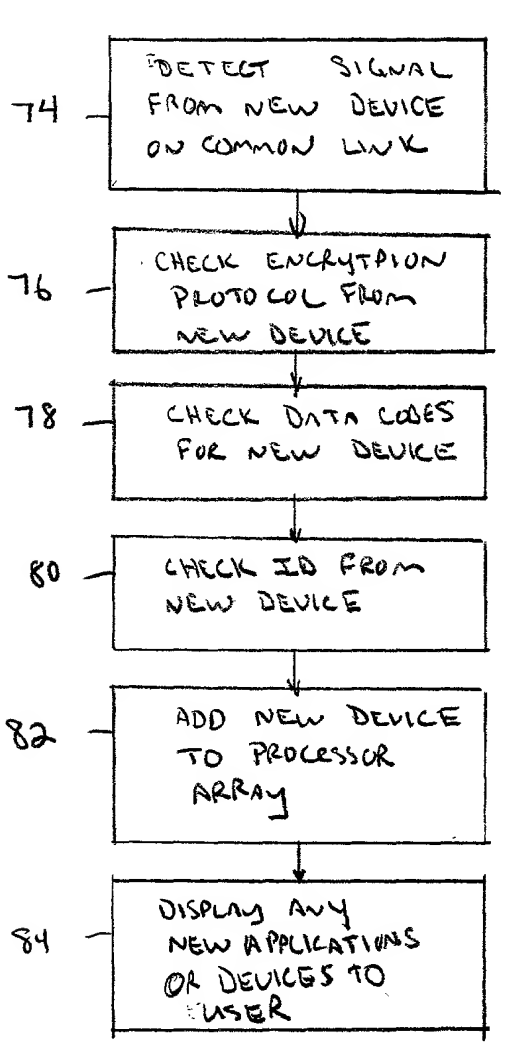
46
74
DETECT SIGNAL FROM NEW DEVICE ON COMMON LINK
76
CHECK ENCRYPTION PROTOCOL FROM NEW DEVICE
78
CHECK DATA CODES FOR NEW DEVICE
80
CHECK ID FROM NEW DEVICE
82
ADD NEW DEVICE TO PROCESSOR ARRAY
84
DISPLAY ANY NEW APPLICATIONS OR DEVICES TO USER

FIG. 6

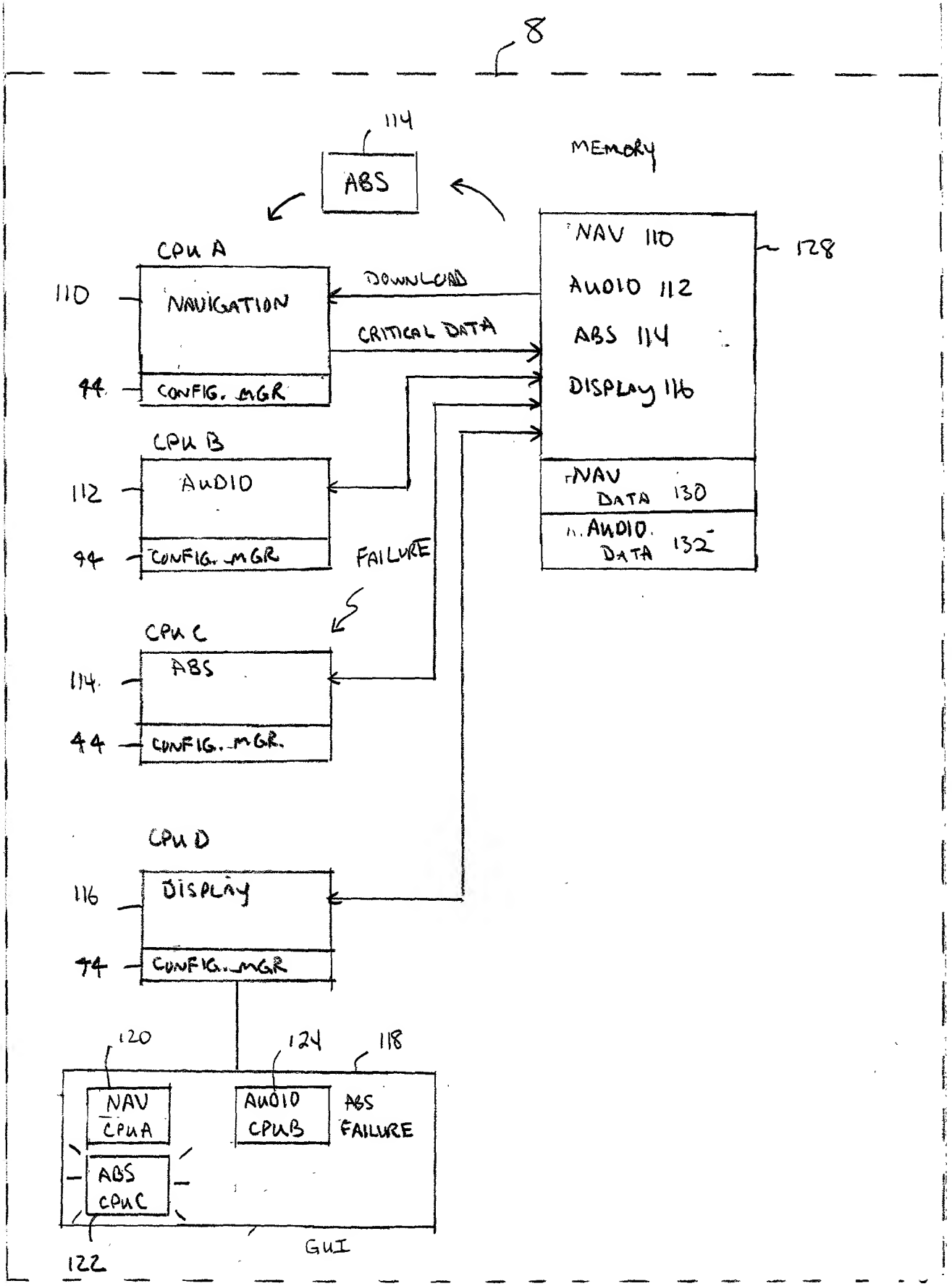
8
114
ABS
MEMORY
NAV 110
AUDIO 112
ABS 114
DISPLAY 116
128
NAV DATA 130
AUDIO DATA 132
CPU A
110
NAVIGATION
CONFIG. MGR
44
DOWNLOAD
CRITICAL DATA
CPU B
112
AUDIO
CONFIG. MGR
44
FAILURE
CPU C
114
ABS
CONFIG. MGR
44
CPU D
116
DISPLAY
CONFIG. MGR
44
120
124
118
NAV CPUA
AUDIO CPUB
ABS FAILURE
ABS CPUC
122
GUI

FIG. 7

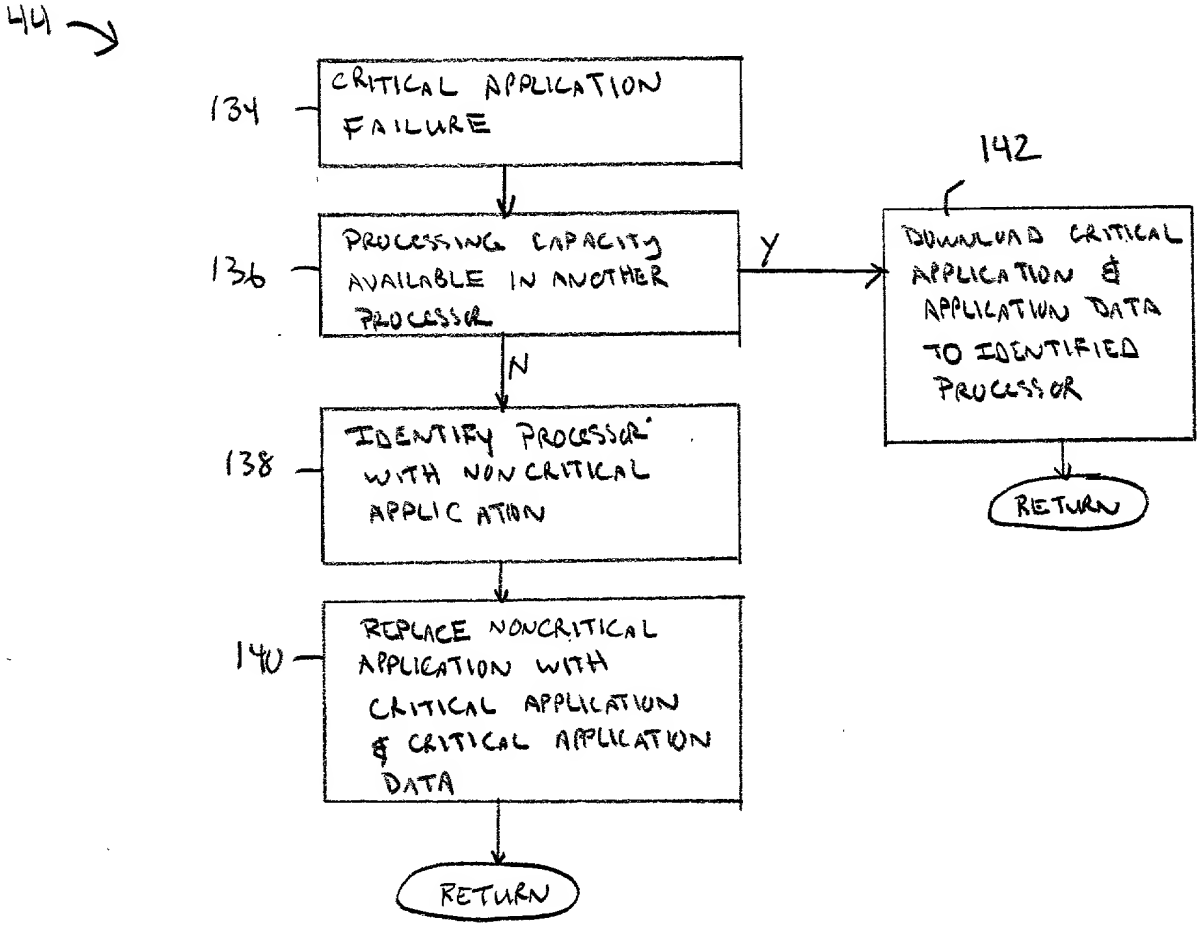
44
134
CRITICAL APPLICATION FAILURE
136
PROCESSING CAPACITY AVAILABLE IN ANOTHER PROCESSOR
Y
142
DOWNLOAD CRITICAL APPLICATION & APPLICATION DATA TO IDENTIFIED PROCESSOR
RETURN
N
138
IDENTIFY PROCESSOR WITH NON CRITICAL APPLICATION
140
REPLACE NONCRITICAL APPLICATION WITH CRITICAL APPLICATION & CRITICAL APPLICATION DATA
RETURN

FIG. 8

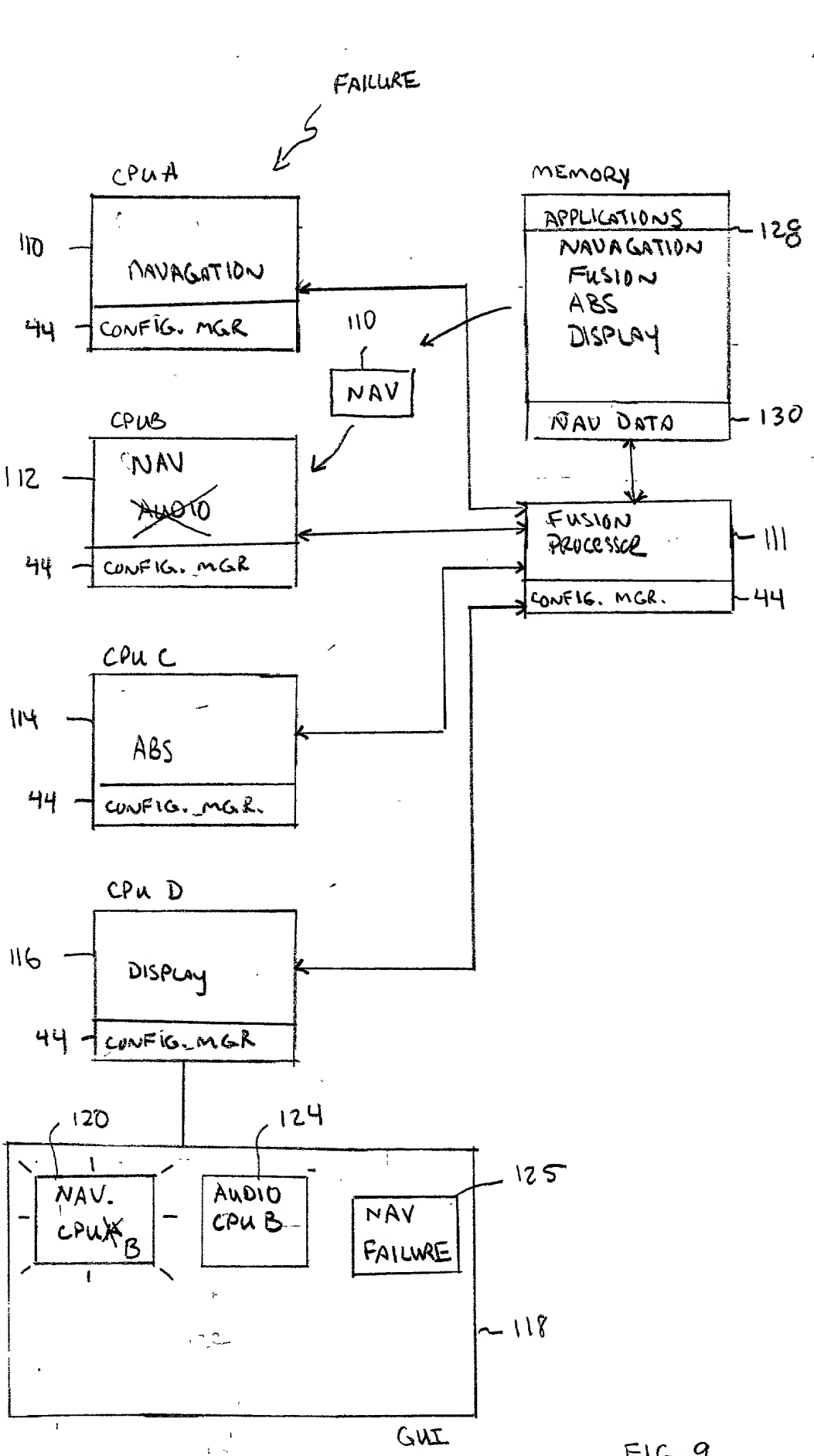
8
FAILURE
CPU A
110
NAVAGATION
44
CONFIG. MGR
110
NAV
MEMORY
APPLICATIONS
128
NAVAGATION
FUSION
ABS
DISPLAY
NAV DATA
130
CPU B
112
NAV
AUDIO
44
CONFIG. MGR
FUSION
PROCESSOR
111
CONFIG. MGR.
44
CPU C
114
ABS
44
CONFIG. MGR.
CPU D
116
DISPLAY
44
CONFIG. MGR
120
124
125
NAV.
CPU B
AUDIO
CPU B
NAV
FAILURE
118
GUI

FIG. 9

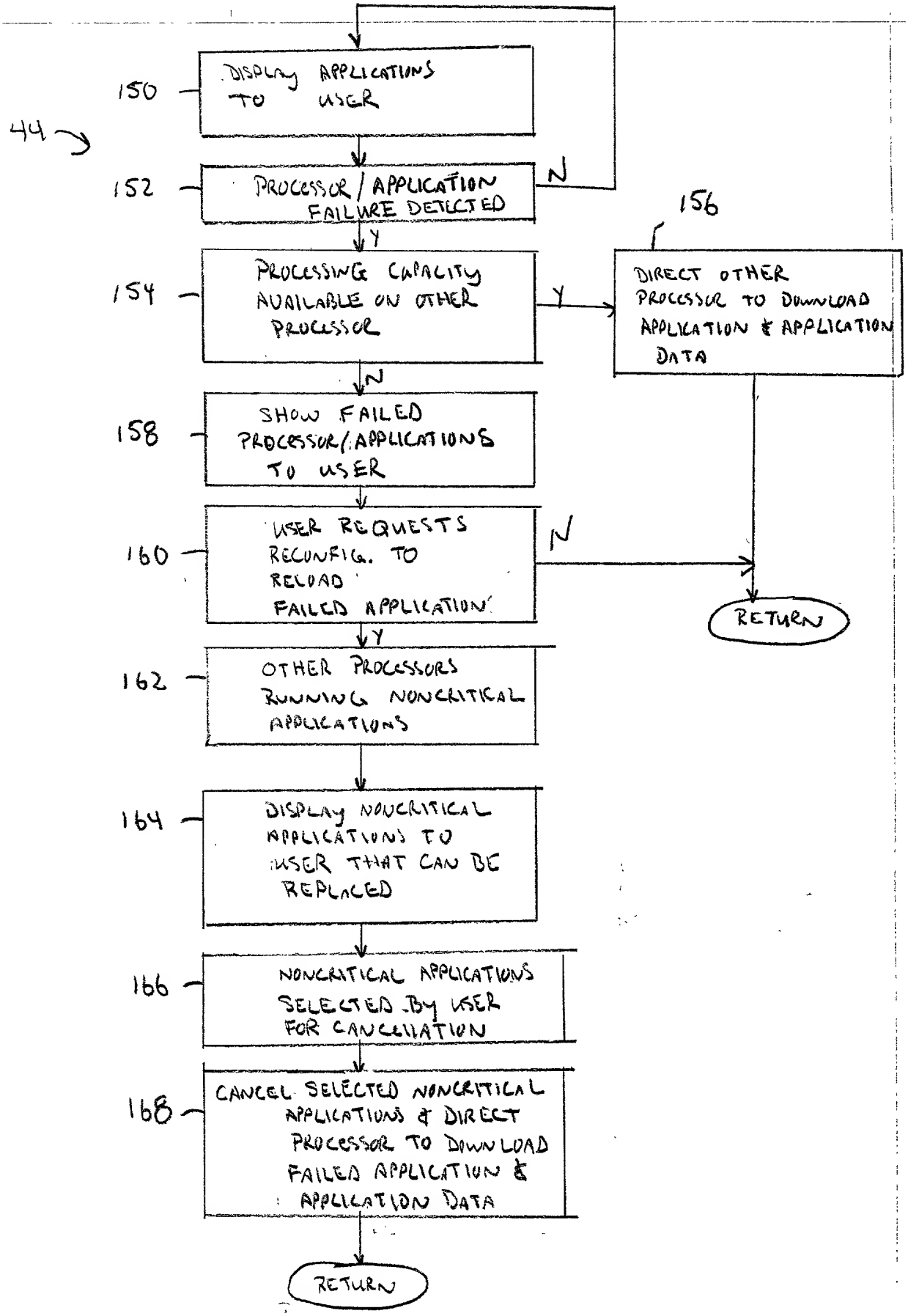
44
150
DISPLAY APPLICATIONS TO USER
152
PROCESSOR / APPLICATION FAILURE DETECTED
N
Y
154
PROCESSING CAPACITY AVAILABLE ON OTHER PROCESSOR
Y
156
DIRECT OTHER PROCESSOR TO DOWNLOAD APPLICATION & APPLICATION DATA
N
158
SHOW FAILED PROCESSOR/APPLICATIONS TO USER
160
USER REQUESTS RECONFIG. TO RELOAD FAILED APPLICATION
N
Y
RETURN
162
OTHER PROCESSORS RUNNING NONCRITICAL APPLICATIONS
164
DISPLAY NONCRITICAL APPLICATIONS TO USER THAT CAN BE REPLACED
166
NONCRITICAL APPLICATIONS SELECTED BY USER FOR CANCELLATION
168
CANCEL SELECTED NONCRITICAL APPLICATIONS & DIRECT PROCESSOR TO DOWNLOAD FAILED APPLICATION & APPLICATION DATA
RETURN

FIG. 10

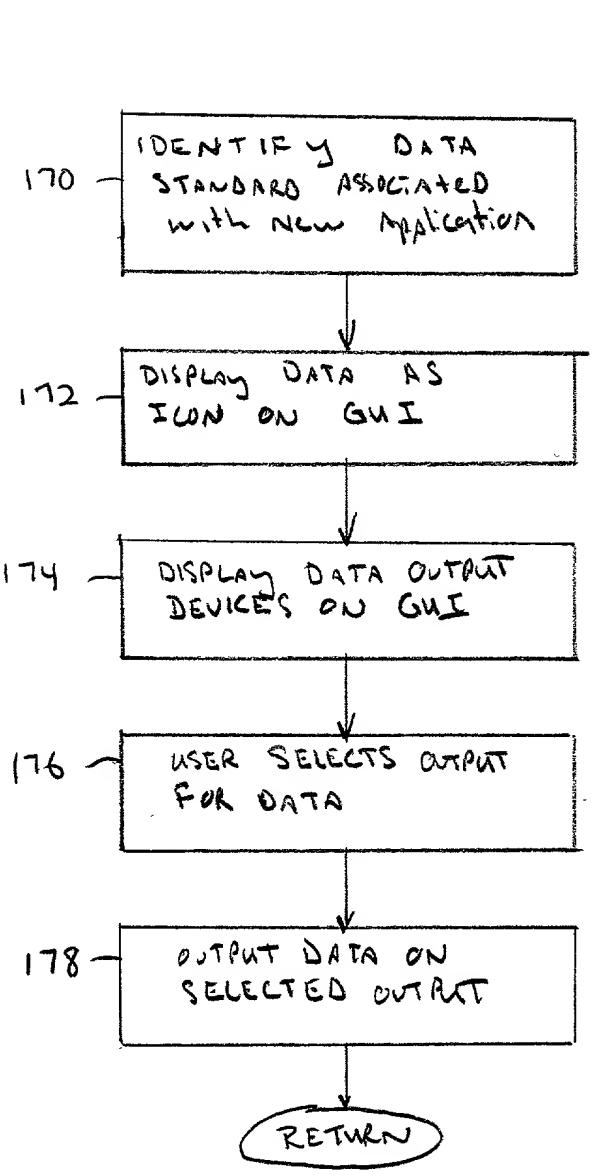
42
170
IDENTIFY DATA STANDARD ASSOCIATED with New Application
172
DISPLAY DATA AS ICON ON GUI
174
DISPLAY DATA OUTPUT DEVICES ON GUI
176
USER SELECTS OUTPUT FOR DATA
178
OUTPUT DATA ON SELECTED OUTPUT
RETURN

FIG. 11

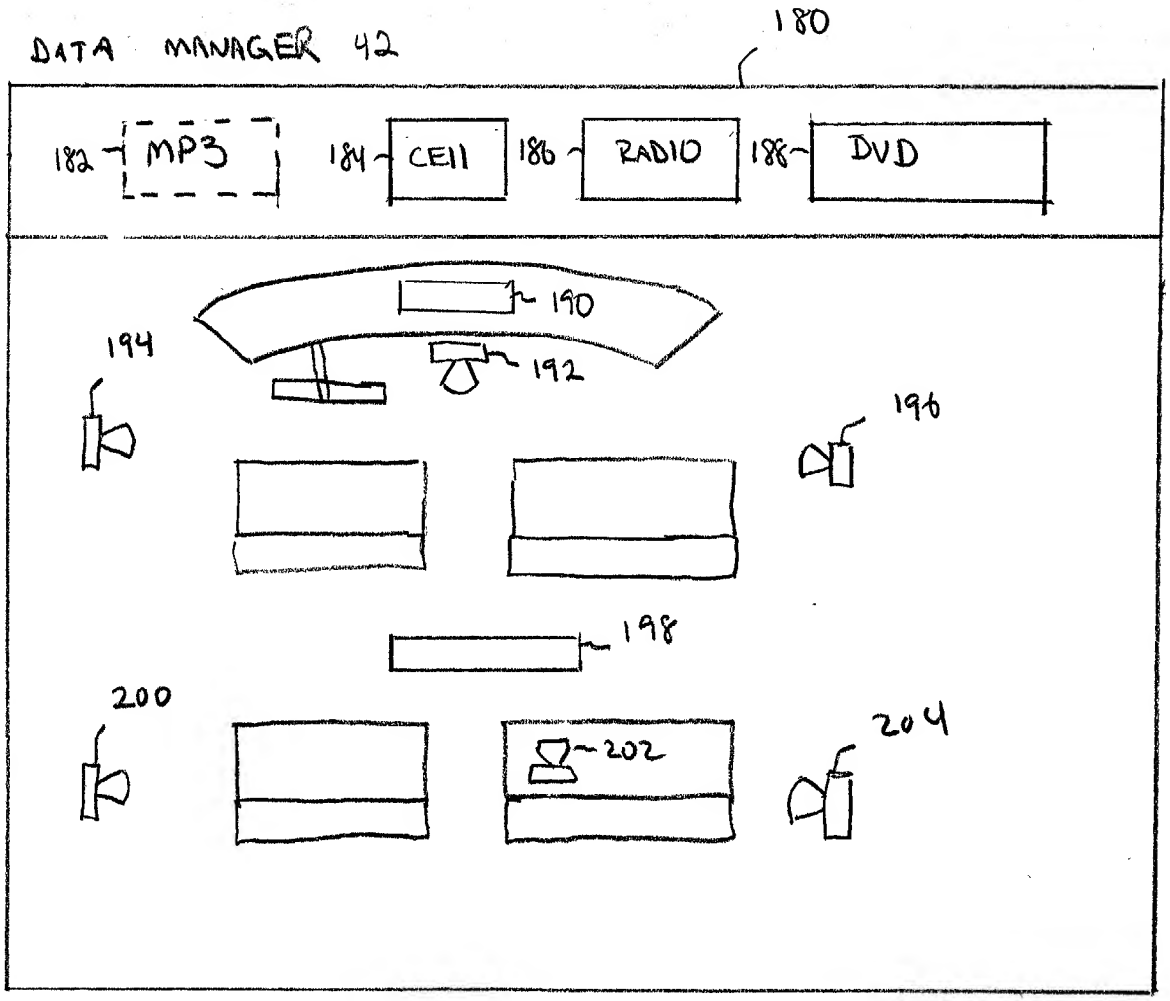
DATA MANAGER 42
180
182
MP3
184
CELL
186
RADIO
188
DVD
190
192
194
196
198
200
202
204

FIG. 12

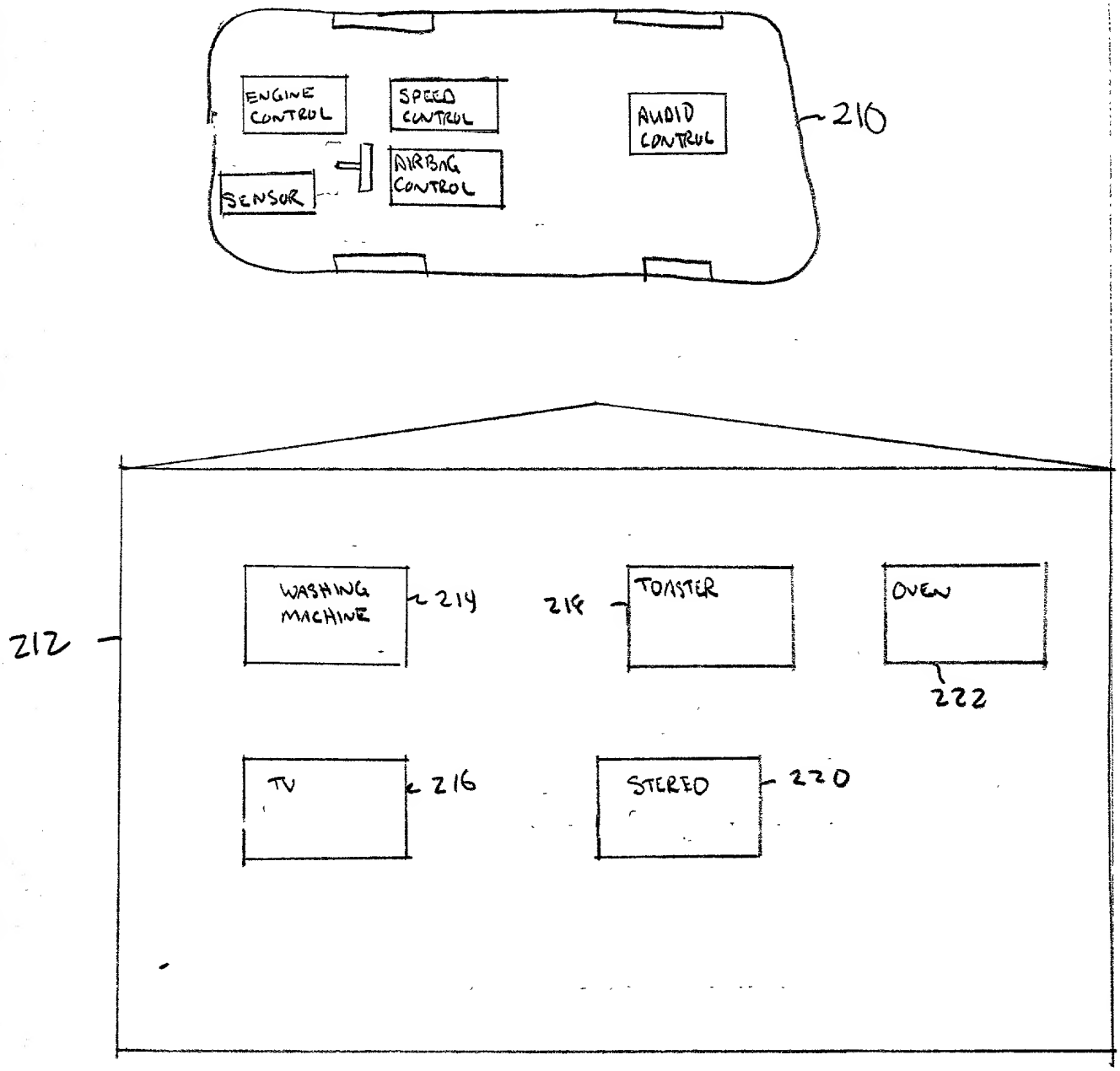
ENGINE CONTROL
SPEED CONTROL
AUDIO CONTROL
210
AIRBAG CONTROL
SENSOR
212
WASHING MACHINE
214
216
TOASTER
OVEN
222
TV
216
STEREO
220

FIG. 13